



A8/A6

Modular Patient Monitors



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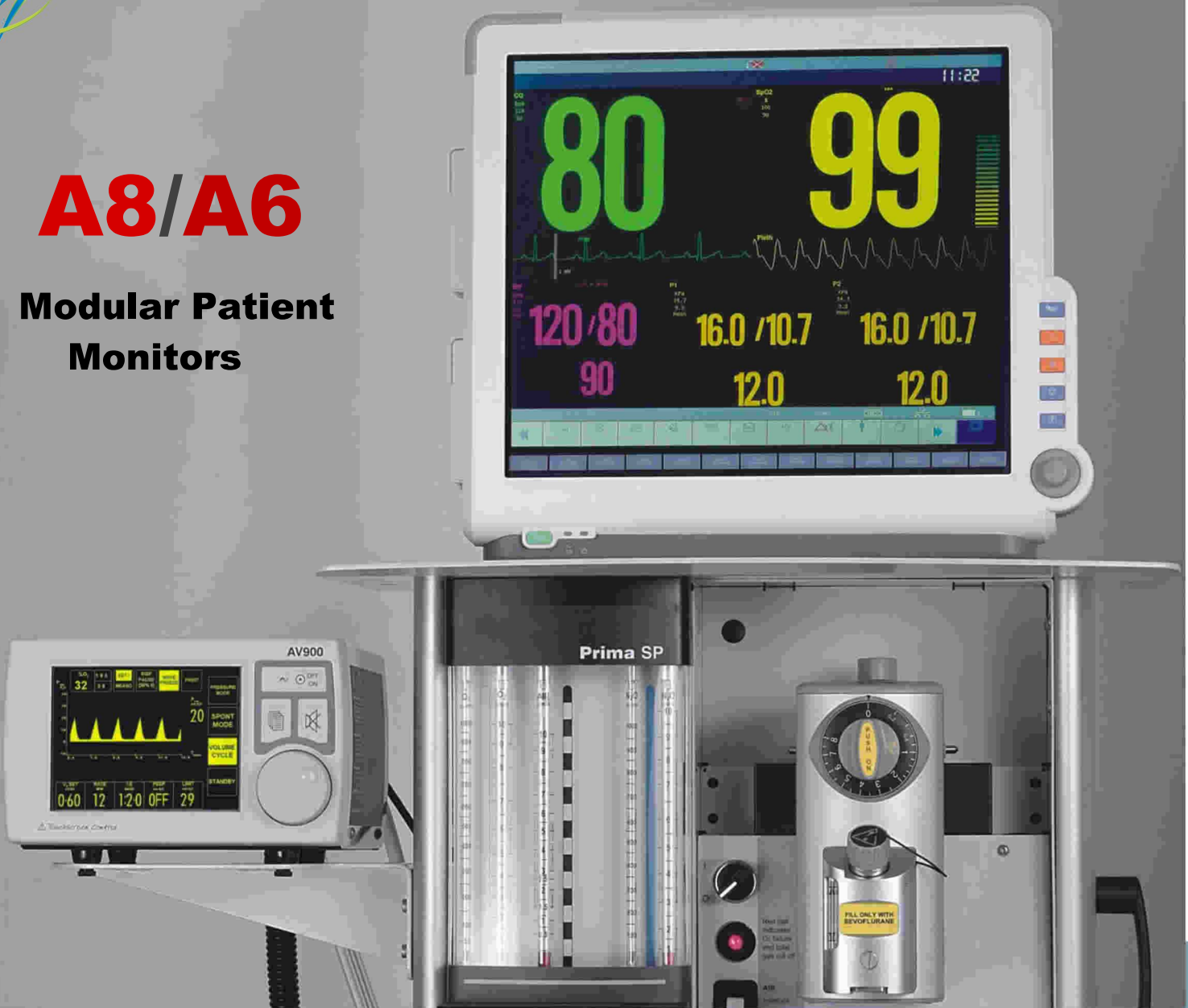
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A8/A6

Modular Patient Monitors



- Global-Leading all-in-one module with display and built-in battery.
- 17" /14" (A8/A6) anti-glare color TFT-LCD display.
- Powerful measurement, ergonomic and flexible design.
- Can connect independent large display when multi-display is required.
- Fanless cooling-down system, keep the monitor working quietly.
- Dozens of parameters with various modules assembled as demand, easy upgrade, save replacement cost.
- Distinguished scientific and technological temperament, enhance the overall image of hospital.



A8



A6

Clinical mounting solutions



Wall mount

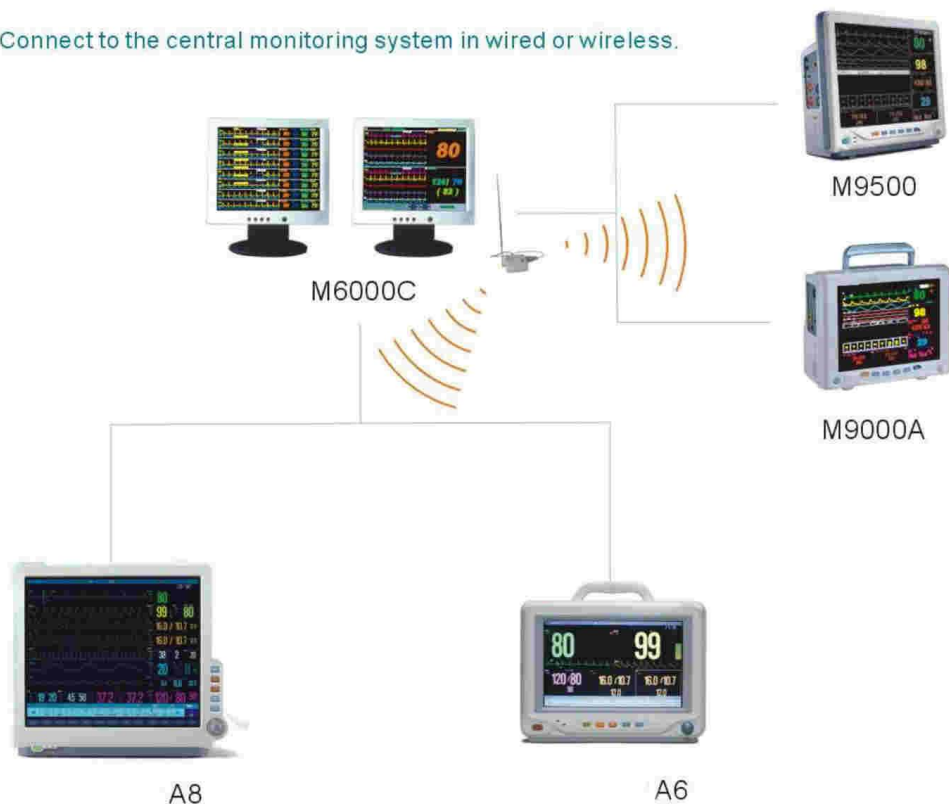


Rolling stand



- Multi-screen, multi-interface display.
- Each screen can display user defined different parameters, to assure real-time monitoring entire data

Connect to the central monitoring system in wired or wireless.



EMS Emergency Mobile Server



Size and Weight

- Size : 160mm×99mm×71mm
- Weight : ≤0.6kg

Display

- 3.5" Color TFT-LCD; Resolution : 320×240 pixels
- Waveform: Up to 12 tracks

Battery

- Type :3.7V/1800mAh Rechargeable lithium ion battery
- Operating time: ≥60 minutes
- Charging time: Standby state: ≤ 6 h
- Turn off delay:5 to 10 minutes after the low battery alarm first occurs.

- Standard Interface: HR, SpO2, NIBP, RESP, TEMP. and waveform of ECG, SpO2, RESP.
(ECG waveform available for concatenation)
- Bigfont interface: HR, SpO2, NIBP, 1 channel ECG waveform.
- User defined interface: 3 basic parameter + 1 Blood Pressure parameter , 1~3 channel waveform
- Arrhythmia analysis and ST analysis.
- Simultaneous display of 7 / 12 lead ECG in one screen
- Independent physiological alarm light and technical alarm light.



Clinical mounting solutions Can assemble on Bedrail, I.V. stand, Wall mount ; Rolling stand.



- Seamless transport solution, Fully meet the clinic demand,
- Providing fast and convenient monitoring during patient transfer with display, battery, alarm and storage capability.
- Patient's data transferring automatically when connect to Monitor
- Extremely compact design, convenient to carry, allowing patient to roam freely,
- 3.5" Color TFT-LCD display,
- 480 groups NIBP review,
- Power off storage of 8 hours trend,
- Built-in rechargeable lithium battery can work more than 1 hours.



EMS All-In-One Module options:

	EMS1	EMS2	EMS3	EMS4	EMS5	EMS6	EMS7	EMS8
RESP	✓	✓	✓	✓	✓	✓	✓	✓
2-TEMP	✓	✓	✓	✓	✓	✓	✓	✓
NIBP	✓	✓	✓	✓	✓	✓	✓	✓
2-IBP	✓	✓			✓	✓		
3/5 Lead ECG	✓		✓		✓		✓	
12-Lead ECG		✓	✓	✓		✓		✓
Digital SpO2	✓	✓	✓	✓				



Advanced Modular Monitoring



ICG



- Non-invasive method to measure patient's Cardio Output and Hemodynamic status, safe and easy operate



AG



- Anaesthesia Gas module, measure concentration of Et and Fi CO₂, O₂, N₂O and ISO, ENF, DES, SEV, HAL



SpO₂



- Masimo / Nellcor SpO₂ is optional
- High capacity against interference of ESU, motion & low perfusion



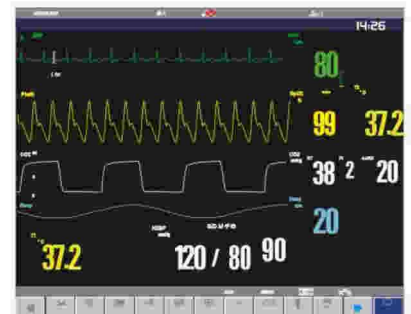
2IBP



- Max. 8 IBP measurement with waveform, Systolic, Diastolic, Mean Pressure on ART, CVP, ICP, PA, LAP etc to fulfill different positions invasive blood pressure measuring demands



CO₂



- Sidestream / Mainstream / Microstream EtCO₂ is optional
- Various option can be suitable for intubated patient, ventilation relied patient, non-intubated patient



Dual-alarm light



Prompt Knob



Touch Screen (Option)



Backlight button

- Touch Screen (Option) , supporting for Mouse Key board operation.
- Available for multi-language interface.
- Independent Physiological & Technical Alarm.
- Built-in detachable rechargeable lithium battery
- Particularly backlight button for night operation
- SD card socket, effective storage for historical patient data.



Lithium Battery



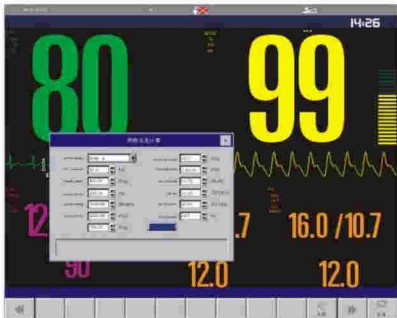
Abundant Extension Interface



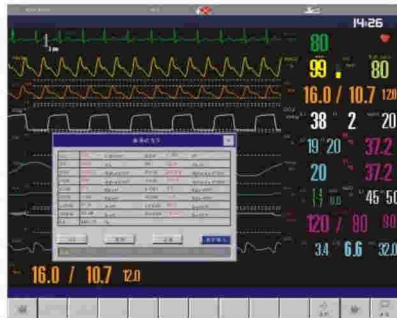
Hidden Handle



SD storage card



Drug dose calculation



Hemodynamics calculation



OXYCRG

- Display 16 minutes trend of HR, SPO2, RESP



Short trend

- Maximum 168 hour graphic and tabular trends



Other bed

- Display other bedside monitor's all parameter and one waveform, support user defined parameter display



Big font

- User can select 5 parameters (related waveform will display if available)
- Clear observation in a long distance, especially suitable for ICU, CCU room checking and monitoring during night

A8/A6 Main Unit

Size and Weight

- Size: 434mm×89mm×206mm (A8) / 422mm×362mm×213mm(A6)
- Weight: <11kg (A8) / <9kg(A6)
- Standard module slot: 4
- Additional module rack Slot: 1

Power supply

- Power Voltage: AC 100-240V 50/60Hz
- Power Input: <150VA
- Input Current: 1.7-0.8A
- Safety class: Category I

Display

- 17"/14.1"(A8/A6) Color Anti-glare TFT-LCD
- Resolution: 1280×1024 pixels (A8) / 1280×800 pixels (A6)

Battery (Option)

- Type: Rechargeable Lithium battery, 11.1V/4.0AH
- Operating time under the normal use and full charge: >60minutes (2 batteries for 120 minutes)

Recorder (Option)

- Method: Thermal dot array
- Paper width: 50 mm (1.97 in)
- Paper length: 15m
- Paper Speed: 12.5 / 25 / 50 (mm/sec)
- Traces: Maximum 3 tracks
- Recording way: Real-time recording, Periodic recording, Alarm recording

Alarm

- Level: Low, medium and high
- Indication: Auditory and visual
- Patient Physiological Alarm Light color: Yellow & Red;
- Equipment Technical Alarm Light color: Blue
- Supports Pitch Tone and multi-level volume;
- Supports custom arrhythmia tone

Input device

- Touch button: standard config, support operation of shortcut menu.
- Knob: standard config
- Mouse input: Support
- Keyboard input: Support

System Output & Extensible Interfaces

- Ethernet Network: 2 Standard RJ45 socket
- Defibrillation Output: 1 RJ11 socket
- Nurse Call: 1 BNC socket
- Video Output: 1 DVI port, 1 VGA port
- USB1.1 port: 6
- Auxiliary Module Rack connector: 1
- SD memory card: 2G (Standard config)
- Analog Output (ECG or IBP): Option

Trend & Reviewing :

- Trend: 168 hours
- NIBP measurement reviewing: 1000 groups
- ARR event: 128 groups of ARR event and the associated waveform.
- Alarm events: 128 groups of parameter alarm events and associated parameter waveform at the alarm moment
- Holographic waveform: The storage time depends on the stored waveforms and the quantity of them.

Environment

- Operating temperature: 0~+40°C
- Storage temperature: -20°C to +50°C
- Operating humidity: 15% to 85% (non condensing)
- Storage humidity: 10% to 93% (non condensing)
- Operating atmospheric pressure: 860hPa to 1060hPa
- Storage atmospheric pressure: 500hPa to 1060hPa

Safety:

- IEC60601-1 Approved, CE marking according to MDD93/42/EEC

Performance:

ECG

- Lead Mode: 3-leads ECG input
5-leads ECG input
12-leads ECG input
- Lead selection: I, II, III
I, II, III, aVR, aVL, aVF, V-
I, II, III, aVR, aVL, aVF, V1-V6 (option)
- Gain: 2.5 mm/mV(×0.25), 5 mm/mV(×0.5), 10 mm/mV(×1),
20 mm/mV(×2), 40 mm/mV(×4), Auto
- CMRR: Monitor mode ≥105dB
Surgery mode ≥105dB
Diagnostic mode ≥90dB
- Frequency response (-3d B):
Monitor mode 0.5-40Hz
Surgery mode 1-25Hz
Diagnostic mode 0.05-150Hz
- Input impedance: ≥5.0 Mohm
- ECG signal range: ±10.0 mV
- Electrode offset potential: ≤500 mV
- Patient Leakage Current: <10 uA
- Standardizing signal: 1 mV ± 5%
- Baseline recovery: <5s after Defibrillation. (Mon or Surg mode)
- Indication of electrode separation: Every electrode (exclusive of RL)
- Protection: Breakdown Voltage 4000VAC 50/60Hz; defibrillator proof
- Sweep speed: 12.5mm/s, 25mm/s, 50mm/s

HR

- Range: Adult 10-300 bpm
Pediatric & Neonate: 10-350bpm

- Refreshing time: ≤50 bpm Per 2 pulses
50-120bpm Per 4 pulses
≥120bpm Per 6 pulses

- Resolution: 1 bpm
- Accuracy: ±1% or ±1 bpm, whichever is greater

ST segment

- Measurement range: -2.0mV-2.0mV
- Accuracy: -0.8mV-0.8mV: ±0.02mV or ±10% whichever is greater
Over ±0.8mV: unspecified
- Resolution: 0.01mV

RESP

- Method: Thoracic impedance
- Lead Selected from: I (RA-LA) or II (RA-LL); Default: I
- Gain: ×0.25, ×1, ×2, ×4
- Bandwidth: 0.25 Hz to 2.0Hz (-3dB)
- Sweep speed: 6.25mm/s, 12.5mm/s, 25mm/s
- Measurement Range: 0-150 rpm
- Resolution: 1 rpm
- Accuracy: ±2 rpm or 2% whichever is greater
- Delay of Apnea Alarm: 10s, 15s, 25s, 30s, 35s, 40s, 45s, 50s, 55s, 60s

NIBP

- Way of measurement: Automatic oscillometry
- Range of measurement:
- Adult: SYS 30-270 mmHg
DIA 10-220 mmHg
MAP 20-235 mmHg
- Child: SYS 30-235 mmHg
DIA 10-220 mmHg
MAP 20-225 mmHg
- Neonate: SYS 30-135 mmHg
DIA 10-100 mmHg
MAP 20-125 mmHg
- Cuff pressure range: 0-300 mmHg
- Resolution: 1 mmHg
- Pressure Accuracy: Static: ±2% or ±3 mmHg, whichever is greater
Clinical: ±5 mmHg average error
standard deviation: ≤8 mmHg
- Unit: mmHg, kPa
- Measurement mode: Manual, Auto, STAT
- Intervals for AUTO measurement time: 1, 2, 3, 4, 5, 10, 15, 30, 60, 90 minutes;
2, 4, 8, 12 hours
- STAT mode cycle time: Keep 5 minutes, at 5 seconds interval.
- Overpressure Protection: Hardware and software double protections
- Pulse rate range: 40 - 240 bpm

BLT-SpO2 (Digital Technic)

- Measurement Range: 0-100%
- Resolution: 1%
- Accuracy: At 70-100%, ±2%
At 0-69%, unspecified

PR

- Measurement Range: 25-255 bpm
- Resolution: 1 bpm
- Accuracy: ±1% or ±1 bpm, whichever is greater

Neilor-SpO2 (option)

- Measurement Range: 0-100%
- Resolution: 1%
- Accuracy: At 70-100%, ±2% (Adult)
At 70-100%, ±3% (Neonate)
At 70-100%, ±2% (Low Perfusion)
At 0-69%, unspecified

PR

- Measurement Range: 20-300 bpm
- Resolution: 1 bpm
- Accuracy: 20bpm to 250bpm: ±3 bpm
251bpm to 300bpm: unspecified

Masimo SpO2 (option)

- Measurement range: 0% to 100%
- Resolution: 1%
- Accuracy: 70% to 100%: ±2% (adult/pediatric, non-motion conditions)
70% to 100%: ±3% (neonate, non-motion conditions)
70% to 100%: ±3% (motion conditions)
0% to 69%: unspecified
- Average time: 2-4s, 4-8s, 8s, 10s, 12s, 14s, 16s

PR

- Measurement range: 25 bpm to 240 bpm
- Accuracy: ±3 bpm (non-motion conditions)
±5 bpm (motion conditions)
- Resolution: 1 bpm

TEMP

- Max Channel: 8
- Measurement way: Thermal resistance way
- Measurement Range: 0.0°C-50.0°C(32°F-122°F)
- Accuracy: ±0.1°C or ±1°F (exclusive of probe)
- Resolution: 0.1°C or 1°F
- Unit: Celsius (°C), Fahrenheit (°F)
- Connecting cable: Compatible with YSI-400 serial

IBP

- Max Channel: 8
- Measurement way: Directly Invasive pressure measurement
- Sensitivity of transducer: 5uV/V mmHg, ±2%
- Impedance of transducer: 300 to 3000Ω

- Measurement Range: -50 ~ +350 mmHg
- Resolution: 1mmHg
- Unit: mmHg, kPa, cmH2O
- Accuracy: Static: ±1mmHg or ±2%, whichever is greater (exclusive of transducer)
±4mmHg or ±4%, whichever is greater (inclusion of transducer)
- Dynamic: ±4mmHg or 4%, whichever is greater
- Transducer sites: Arterial Pressure (ART)
Pulmonary Artery Pressure (PA)
Left Atrium Pressure (LAP)
Right Atrium Pressure (RAP)
Central Venous Pressure (CVP)
Intracranial Pressure (ICP)
P1/P2
- Selection of measurement range: ART: 0 ~ +350mmHg
PA: -10 ~ +120 mmHg
CVP/RAP/LAP/ICP: -10 ~ +40 mmHg
P1/P2: -50 ~ +350 mmHg

EtCO2 (Sidestream)

- Measure method: Infrared spectrum
- Measurement Range: 0.0-13.1% (0-99.6 mmHg)
- Resolution: 1 mmHg
- Unit: %, mmHg, kPa
- Accuracy: 0% to 4.9%, ±0.3% (±2.0 mmHg)
5.0% to 13.1%, < ±10% of the reading
- Measurement range of awRR: 3-150 rpm
- Calibration: Offset calibration: auto, manual, Gain calibration

EtCO2 (Mainstream)

- Measure method: Infrared spectrum
- Warm up time: Capnogram displayed in less than 15 seconds, At an ambient temperature of 25°C, full specifications within 2 minutes.
- Measurement Range: 0.0-19.7% (0-150 mmHg)
- Resolution: 1 mmHg
- Rise time (10 l/min): ≤ 60 ms
- Unit: %, mmHg, kPa
- CO2 Accuracy: 0 - 40 mmHg, ±2 mmHg
41 - 70 mmHg, ±5% of reading
71 - 100 mmHg, ±8% of reading
101 - 150 mmHg, ±10% of reading
(at 760 mmHg, ambient temperature of 35°C)
- awRR measurement range: 0-150 rpm
- awRR measurement Accuracy: ±1 rpm

EtCO2 (Microstream)

- Measure method: Infrared spectrum
- Warm up time: Capnogram displayed in less than 20 seconds, At an ambient temperature of 25°C, full specifications within 2 minutes.
- Measurement Range: 0 - 19.7 % (0 - 150 mmHg)
- Resolution: 1mmHg
- Unit: %, mmHg, kPa
- CO2 Accuracy: 0 - 40 mmHg, ±2 mmHg
41 - 70 mmHg, ±5% of reading
71 - 100 mmHg, ±8% of reading
101 - 150 mmHg, ±10% of reading
(at 760 mmHg, ambient temperature of 25°C)
(when RR>80 rpm, all the range is ±12% of reading)
CO2 response time: <3s
awRR measurement range: 2-150 bpm
awRR measurement Accuracy: ±1rpm
Sample Flow Rate: 50 ml/min ±10 ml/min

Anesthetic Gas

- Measure method: Infrared spectrum
- Fi and Et values: CO2, N2O, O2, AG (HAL, ISO, ENF, SEV, DES)
- Resolution: 1%
- Unit: %
- Calibration: Room air calibration performed automatically when changing airway adapter (<5 sec)
- Warm-up time: <10 s, full accuracy within 1 min
- Measurement and alarm range of AG:

Gas	Range	Accuracy
CO2	0-10 %	± (0.3% ABS+4% REL)
N2O	0-100 %	± (2% ABS+8% REL)
O2	10-100 %	± (2% ABS+2% REL)
HAL, ISO, ENF	0-5%	± (0.15% ABS+10% REL)
SEV	0-8%	± (0.15% ABS+10% REL)
DES	0-18%	± (0.15% ABS+10% REL)

 - awRR measurement range: 0-150 rpm
 - awRR measurement Accuracy: ±1 rpm
 - Rise time (flowing speed 10 l/min) CO2 ≤ 90 ms
O2 ≤ 300 ms
N2O ≤ 300 ms
Hal, Iso, Enf, Sev, Des ≤ 300 ms
 - Total system response time: <1 seconds

Noninvasive Cardio Output (ICG):

- Method: Measurement of thoracic electrical bioimpedance
- Measurement Range: HR: 40-250 bpm
SV: 5-250ml
SI: 5-125ml/m2
C.O.: 1.4-15 L/min
TFC: 15-143 KJ
- Accuracy: HR ±2bpm
SV: unspecified
C.O unspecified
- Alarm ran e: C.I.: 0.0 L/min/m2 to 15.0 L/min/m2 continuousl ad ustable.
TFC: 10 /kJ to 150 /kJ continuously adjustable.

Standard configuration of A8/A6:

Mainunit: 17"/14.1"(A8/A6)anti-glare TFT-LCD display, 4 Standard module slot, 1 Additional module rack Slot (for EMS all-in-one module), 13 Touch buttons (Only for A8), 2RJ45 ethernet socket, 1 Defibrillation Output, 1 Nurse Call socket, 1 DVI port, 1 VGA port, 6 USB1.1 port, 1 Auxiliary Module Rack connector, 2G SD memory card.

Option of A8/A6:

- EMS module: 8 kinds of option
- Option Module: Sidestream CO2 module, Microstream CO2 module, Mainstream CO2 module, AG module, ICG module, IBP module, Temp module, SpO2 module
- Module Rack: Auxiliary Module Rack
- Navigating: USB compatible mouse and keyboard.
- Printing: 3 channel thermal recorder
- Mounting: Rolling stand, wall mount
- Battery: 11.1V/4.0AH Rechargeable Lithium Battery(max 2 pcs),
- Other options: External Display, Wireless Lan, Extensive Memory card, Analog Output (ECG or IBP), Touch Screen.

*Specifications subject to change without prior notice.



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